Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (Currently Amended) A serial link transceiver with defect-detecting capability, comprising:

a differential transmitter configured for differential signal transmission;

a differential receiver configured to receive a differential signal from [[said]] the differential transmitter;

first and second differential transmission lines that are AC-coupled between the differential receiver and the differential transmitter; and

wherein [[said]] the differential receiver includes a monitoring system that detects a defect in one of the differential transmission lines, [[said]] the monitoring system determining [[said]] the defect based on a common mode signal threshold detected in [[said]] the differential signal received at [[said]] the receiver; and

wherein the monitoring system is configured to detect short circuits across AC-coupling capacitors in one of the AC-coupled differential transmission lines.

2. (Original) The apparatus according to claim 1, wherein the monitoring system detects one of:

open circuits in one of the transmission lines;

short circuits between one or more of the transmission lines and a power supply or ground plane; and

short circuits between the transmission lines.

3. (Cancelled)

4. (Original) The apparatus according to claim 1, wherein the monitoring system is coupled directly to one of the differential transmission lines.

5. (Original) The apparatus according to claim 1, wherein the monitoring system is coupled indirectly to one of the differential transmission lines.

6. (Cancelled)

7. (Previously Presented) The apparatus according to claim 1, wherein the differential receiver comprises a common mode control circuit coupled to the differential transmission lines, and the monitoring system is coupled to an output of the common mode control circuit.

8. (Original) The apparatus according to claim 7, wherein the monitoring system comprises a current monitoring system.

9. (Original) The apparatus according to claim 7, wherein the monitoring system comprises a voltage monitoring system.

10. (Original) The apparatus according to claim 1, wherein the monitoring system comprises a voltage monitoring system.

11. (Original) The apparatus according to claim 1, wherein the monitoring system comprises a current monitoring system.

12. (Original) The apparatus according to claim 8, wherein the current monitoring system is configured to sense alternating current provided by the common-mode control circuit.

13. (Original) The apparatus according to claim 8, wherein the current monitoring system is configured to sense direct current provided by the common-mode control circuit.

14. (Original) The apparatus according to claim 8, wherein the current monitoring system is configured to sense alternating current and direct current provided by the common-mode control circuit.

15. (Original) The apparatus according to claim 1, wherein the monitoring system is configured to output an indication of a defect when an alternating current is detected exceeding a predetermined threshold.

16. (Original) The apparatus according to claim 1, wherein the monitoring system is configured to output an indication of a defect when direct current is detected exceeding a predetermined threshold.

17. (Original) The apparatus according to claim 1, wherein the monitoring system is configured to output an indication of a defect when no signal is received by the differential receiver and a current is sensed by the monitoring system.

18. (Original) The apparatus according to claim 1, wherein the monitoring system is configured to output an indication of a defect upon any of the following conditions:

alternating current is detected exceeding a predetermined threshold;

direct current is sensed by the current monitoring system is detected exceeding a predetermined threshold; or

no signal is received by the differential receiver and a current is sensed by the current monitoring system is detected exceeding a predetermined threshold.

19. (Original) The apparatus according to claim 1, wherein the monitoring system is configured to output an indication of a defect when an open circuit exists in one or more of the differential transmission lines.

20. (Original) The apparatus according to claim 1, wherein the monitoring is configured to output an indication of a defect when a short circuit exists between one or more of the differential transmission lines and a power supply.

21. (Original) The apparatus according to claim 1, wherein the monitoring system is configured to output an indication of a defect when a short circuit exists between the differential transmission lines.

22. (Currently Amended) The apparatus according to claim [[3]] 1, wherein the monitoring system is configured to output an indication of a defect when a short circuit exists across an AC coupling in one or more of the AC-coupled differential transmission lines.

23. (Currently Amended) The apparatus according to claim [[3]] 1, wherein the monitoring system is configured to output an indication of a defect when an open circuit exists in one or more of the differential AC-coupled transmission lines, when a short circuit exists between one or more of the differential AC-coupled transmission lines and a power supply, when a short circuit exists between the differential AC-coupled transmission lines, and/or when a short circuit exists across an AC coupling in one or more of the differential AC-coupled transmission lines.

24. (Cancelled)

25. (Cancelled)

26. (Cancelled)

27. (Cancelled))

28. (Cancelled)

29. (Cancelled)

30. (Cancelled)